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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,344	10/29/2003	Christian Schmid	200315617-1	8104

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EXAMINER	
SHAH, MANISH S	

ART UNIT	PAPER NUMBER
2853	

DATE MAILED: 01/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/696,344	SCHMID ET AL.	
	Examiner	Art Unit	
	Manish S. Shah	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-2, 4-6, 8, 10-11 & 27-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Pentel KK (# JP 63-061065).

Pentel KK discloses a highlighter ink composition including (a) from 2 to 17 wt% of coloring material (b) from 65 to 85 wt% of an organic solvent; and (c) from 0.5 to 3 wt% of acid compound, wherein acid compound is ascorbic acid and coloring material is dye or pigment (see Abstract), and the value of pKa is constant to the material, and the ascorbic acid inherently has a pKa value of 4.2. So Pentel KK discloses the acid buffer having a pKa from about 2 to 6, more preferably from 4 to 6. They also disclose that the acid buffer includes a weak acid or weak base (see Abstract).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 3, 7, 9 & 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pentel KK (# JP 63-061065) in view of Denninger et al. (# US 2004/0110869) and Kaufmann et al. (# US 5279652).

Pentel KK discloses all the limitation of the claimed invention accept that (1) the acid buffer is succinic acid. (2) The highlighter colorant is a fluorescent colorant. (3) The liquid vehicle includes water or diethylene glycol. (4) The highlighter colorant selected from Acid Blue 9.

Denninger et al. discloses a method of reducing smear during highlighting including the high lighter composition having an acid buffer ([0020]), a highlighter colorant ([0018]; see Examples), and a liquid vehicle, wherein liquid vehicle is water (see Examples), and highlighter colorant is fluorescent and selected from Acid Blue 9 (see Example: 8,13, 20).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the highlighter composition of Pentel KK by the aforementioned teaching of Denninger et al. in order to have the excellent drying characteristic, which gives high quality image with less smear.

Kaufmann et al. teaches that to get the good crystallizing property, marking ink includes the acid buffer, which is selected from succinic acid (column: 4, line: 40-66).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the acid compound in the highlighter composition of Pentel KK by the aforementioned teaching of Kaufmann et al. in order to get the excellent crystallizing characteristic, which gives high quality image with less smear.

3. Claims 13-18 & 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Denninger et al. (# US 2004/0110869) in view of Pentel KK (# JP 63-061065) and Kaufmann et al. (# US 5279652).

Denninger et al. discloses a method of reducing smear during highlighting including the steps of ink-jet printing an ink jet ink to form an image on a substrate; applying a highlighter composition to the image ([0004]-[0007]), the high lighter composition including an acid buffer ([0020]), a highlighter colorant ([0018]; see Examples), and a liquid vehicle (see Examples), and highlighter colorant selected from Acid Blue 9 (see Example: 8,13, 20). They also disclose that the acid buffer is configured for reducing mobility of colorants in the inkjet ink upon therewith ([0005]-[0007]).

Denninger et al. differs from the claim of the present invention is that (1) the acid buffer has a pKa from 2 to 6, more preferably 4 to 6, wherein acid buffer is selected from ascorbic acid, acetic acid. (2) The acid buffer is succinic acid.

Pentel KK discloses a highlighter ink composition including (a) from 2 to 17 wt% of coloring material (b) from 65 to 85 wt% of an organic solvent; and (c) from 0.5 to 3 wt% of acid compound, wherein acid compound is ascorbic acid and coloring material is dye or pigment (see Abstract), and the value of pKa is constant to the material, and the ascorbic acid inherently has a pKa value of 4.2. So Pentel KK discloses the acid buffer having a pKa from about 2 to 6, more preferably from 4 to 6. They also disclose that the acid buffer includes a weak acid or weak base (see Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the acid compound in the highlighter composition of Denninger et al. by the aforementioned teaching of Pentel KK in order to get the excellent drying characteristic, which gives high quality image with less smear.

Kaufmann et al. teaches that to get the good crystallizing property, marking ink includes the acid buffer, which is selected from succinic acid (column: 4, line: 40-66).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the acid compound in the highlighter composition of Denninger et al. by the aforementioned teaching of Kaufmann et al. in order to get the excellent crystallizing characteristic, which gives high quality image with less smear.

4. Claims 19-26 & 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Denninger et al. (# US 2004/0110869) in view of Pentel KK (# JP 63-061065) and Kaufmann et al. (# US 5279652).

Denninger et al. discloses a method of reducing smear during highlighting including the steps of ink-jet printing an ink jet ink to form an image on a substrate; applying a highlighter composition to the image ([0004]-[0007]), the high lighter composition including an acid buffer ([0020]), a highlighter colorant ([0018]; see Examples), and a liquid vehicle (see Examples), wherein acid buffer is selected from acetic acid and succinic acid (see Examples; [0020]); and highlighter colorant selected from Acid Blue 9 (see Example: 8,13, 20). They also disclose that the acid buffer is configured for reducing mobility of colorants in the inkjet ink upon therewith ([0005]-

[0007]). They also disclose that the inkjet colorant is selected from pigment or water-soluble dye or mixture thereof ([0004]); and the liquid vehicle includes a member selected from water, and propylene glycol (see Examples).

Denninger et al. differs from the claim of the present invention is that (1) the acid buffer has a pKa from 2 to 6, more preferably 4 to 6, wherein acid buffer is selected from ascorbic acid and acetic acid. (2) The acid buffer is succinic acid.

Pentel KK discloses a highlighter ink composition including (a) from 2 to 17 wt% of coloring material (b) from 65 to 85 wt% of an organic solvent; and (c) from 0.5 to 3 wt% of acid compound, wherein acid compound is ascorbic acid and coloring material is dye or pigment (see Abstract), and the value of pKa is constant to the material, and the ascorbic acid inherently has a pKa value of 4.2. So Pentel KK discloses the acid buffer having a pKa from about 2 to 6, more preferably from 4 to 6. They also disclose that the acid buffer includes a weak acid or weak base (see Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the acid compound in the highlighter composition of Denninger et al. by the aforementioned teaching of Pentel KK in order to get the excellent drying characteristic, which gives high quality image with less smear.

Kaufmann et al. teaches that to get the good crystallizing property, marking ink includes the acid buffer, which is selected from succinic acid (column: 4, line: 40-66).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the acid compound in the highlighter composition of Denninger et al.

by the aforementioned teaching of Kaufmann et al. in order to get the excellent crystallizing characteristic, which gives high quality image with less smear.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(1) Ascorbic acid (PIM 046) (Pages: 1-3) (http://www.inchem.org/documents/pims/pharm/ascorbic.htm) discloses that the Ascorbic acid has pKa value of 4.2 (see 3.3.1.3 Description).

(2) Acetic acid-Wikipedia, the free encyclopedia (pages: 1-10) (http://en.wikipedia.org/wiki/Acetic_acid) discloses that the acetic aid has pKa value is 4.76 (see page: 1).

(3) Acid dissociation constant- Wikipedia, the free encyclopedia (Pages: 1-3) (http://en.wikipedia.org/wiki/Acidity_constant) discloses that the Succinic acid pKa value is 4.19 (see Page: 3).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manish S. Shah whose telephone number is (571) 272-2152. The examiner can normally be reached on 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Manish S. Shah
Primary Examiner
Art Unit 2853

MSS
1/24/06